

Production of Active Anthracite Suitable for the Purification  
of Waste Waters of the Aniline-Dye Industry. 73-1-22/26

are tabulated in tables 1 and 2. Waste waters are  
analysed and results before and after treatment with  
activated coal are tabulated. There are 1 graph, 4 tables  
and 5 references, 3 of which are Slavic.

SUBMITTED: April, 1, 1956.

ASSOCIATION: Institute of General and Inorganic Chemistry,  
Academy of Sciences, Ukrainian S.S.R.  
Gas Utilisation Institute, Academy of Sciences,  
Ukrainian S.S.R. (Institut Obshchey i Neorganicheskoy  
Khimii AN USSR, Institut Ispol'zovaniya Gaza AN USSR.)

AVAILABLE: Library of Congress

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73-3-21/24

AUTHOR: Kul'skiy, L. A., Shevchenko, M. A., and Turchinovich, G.Yu.

TITLE: Physico-Chemical Studies of the Process of Treating Water with Activated Silicic Acid. - (Fiziko-Khimicheskoye Issledovaniye Protssessa Obrabotki Vody Aktivirovannoy Kremnekislotoy)

PERIODICAL: Ukrainskiy Khimicheskii Zhurnal, 1957, Vol. 23, No.3, pp. 400-405 (USSR).

ABSTRACT: The influence of the salt composition of water on the coagulation, in presence of activated silicic acid was investigated as well as the colloidal effect of silicic acid during the chemical treatment of water. The method of triangular diagrams was used (Ref. 2) allowing for variations of the concentration of various ions in the solution. The tests were carried out in glass cylinders (300 mm high and having a 35 mm diameter.) The salt composition of the solution was varied by introducing varying quantities of NaCl, Na<sub>2</sub>SO<sub>4</sub>, and NaHCO<sub>3</sub> or the corresponding Ca-salts when the total concentration of the Na- or Ca-salts equalled 0.01 N. 21 salt-compositions were tested. Aluminium sulphate and aluminium chloride solutions as well as FeCl<sub>3</sub> were used as coagulants (50mg/litre). The activated silicic acid was obtained by

Card 1/3 chlorinating a sodium silicate solution. The simultaneous

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Physico-Chemical Studies of the Process of Treating Water With  
Activated Silicic Acid.

addition of aluminium sulphate and activated silicic acid was shown to accelerate the formation and settling of flakes. In Na-salt solutions the sedimentation of aluminium hydroxide flakes (Fig. 1) was complete after  $1\frac{1}{4}$  - 2 hours, apart from those fractions in which coagulation does not take place due to high pH values. When activated silicic acid was added the time of sedimentation was reduced to 45 min. The stable zone was maintained; the pH-zone, in which the coagulation occurs, was enlarged. A marked acceleration of coagulation on the whole area of the diaphragm occurred in calcium salt solutions. In the absence of silicic acid the sedimentation required 1 -  $1\frac{1}{2}$  hours; the time required for sedimentation was reduced to 45 - 50 min. when silicic acid was added. Analogous results were obtained when aluminium chloride was used instead of aluminium sulphate (Fig. 2). The effect of  $\text{FeCl}_3$  on the coagulation is shown in figure 3. No acceleration of sedimentation occurred. In Ca-salt solutions a considerable speeding up of the formation and sedimentation of flakes was observed. In this way silicic acid can be used as

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intensifier during the purification of hard waters. The relation between the acceleration of the coagulation process in the presence of silicic acid and the structural-mechanic properties of the solution are shown (Fig. 4). Figure 5 shows the effect of introducing silicic acid on the structure formation when treating the water with aluminium sulphate. It was proved that the influence of silicic acid on the process of coagulation is defined by the order in which the reagents are introduced. Better results were obtained when the silicic acid was led into the coagulants. There are 5 figures and 4 references, 2 of which are Slavic.

SUBMITTED: June, 5, 1956.

ASSOCIATION: Institute of General and Inorganic Chemistry, Academy of Sciences, Ukrainian SSR. (Institut Obshchey i Neorganicheskoy Khimii AN USSR)

AVAILABLE: Library of Congress.

Card 3/3

KUL'SKIY, L.A.; SHEVCHENKO, M.A.; SMIRNOV, P.I.

Ozonization as a method of decolorizing and improving the taste of natural waters. Ukr. khim. zhur. 23 no.5:689-694 '57. (MLRA 10:11)

1. Institut obshchey i neorganicheskoy khimii AN USSR.  
(Water--Ozonization)

KUL'SKIY, L.A.; SHEVOHENKO, M.A.; FORTUNATOV, N.S., kand.khim.nauk,  
otv.red.; POKROVSKAYA, Z.S., red.izd-va; YEFIMOVA, M.I., tekhn.red.

[Improving the quality of natural waters by the oxidation method;  
information reports] Okislitel'nyi metod uluchsheniia kachestva  
prirodnikh vod; informatsionnoe soobshchenie. Kiev, Izd-vo Akad.  
nauk USSR, 1958. 31 p. (MIRA 12:5)

(Water--Ozonization)

KUL'SKIY, L.O. [Kul's'kyi, L.O.]; SHEVCHENKO, M.O.

New technology for improving the quality of drinking water. Visnyk  
AN URSR 2 no.7:42-46. Ja '58. (MIRA 11:9)  
(Water--Purification)

KUL'SKIY, L.; DEMURA, M.

Using wash waters in purifying highly saturated soft waters.  
Zhil.-kom.khoz. 8 no.1:19-21 '58. (MIRA 11:1)  
(Filters and filtration)  
(Water--Purification)



14(0)

AUTHORS: Kul'skiy, L. A., Koganovskiy, A. K., SOV/64-58-8-13/19  
Rybchinskiy, M. I.

TITLE: A Countercurrent Adsorber With a Two-Stage Suspended Layer  
(Protivotochnyy adsorber s dvukh"yarusnym vzveshennym sloyem)

PERIODICAL: Khimicheskaya promyshlennost', 1958, Nr 8,  
pp 498 - 499 (USSR)

ABSTRACT: The use of suspended adsorbents in the purification of industrial waste waters has a number of advantages, but also one drawback in comparison to fixed adsorption layers: the adsorption volume actually used is much smaller (Ref 1). As a result of previous investigations (Ref 2) an adsorber was designed (Fig) in which the suspended adsorbent is contained in two vessels separated from one another. The water which is to be purified through them in succession while the adsorbent automatically flows (counter to the water) from one vessel into the other. The two vessels constitute an organic glass column of 2.2m height. The top vessel is larger than the bottom one. Water containing about 100 mg/l phenol was

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A Countercurrent Adsorber With a Two-Stage Suspended Layer

SOV/64-58-8-13/19

conducted through the apparatus at a rate of 240 l/h, i.e. a linear speed of 6.6 mm per second. A table with comparative data proves that the use of a two-stage column results in a lower adsorbent (active coal) consumption than would be the case with a simple column. There are 1 figure, 1 table and 2 Soviet references.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii AN USSR (Institute of General and Inorganic Chemistry AS UkrSSR)

Card 2/2

KUL'SKIY, L.A. [Kul's'kiy, L.A.], doktor tekhn.nauk, otv.red.; KALYUZHNYI, D.M. [Kaliuzhnyi, D.M.], doktor med.nauk, red.; KVITNITSKAYA, N.M. [Kvitnyts'ka, N.M.], kand.med.nauk, red.; KOGANOVSKIY, O.M. [Kohanova'kiy, O.M.], kand.khim.nauk, red.; SOTNIKOVA, O.V. [Sotnykova, O.V.], kand.med.nauk, red.; SHKURKO, V.L., red.; YURCHISHIN, V.I. [Iurchyshin, V.I.] tekhn.red.

[Sanitary protection of water supplies and industrial sewage purification]  
Sanitarna okhorona vodolmyshch i ochystka promyslovykh stichnykh vod.  
Kyiv, Vyd-vo Akad.nauk URSR, 1959. 162 p. (MIRA 12:7)

1. Akademiya nauk USSR, Kyiv. Rada po vyvchenniu produktyvnykh syl URSR.  
(Sewage--Purification) (Water supply--Hygienic aspects)

KUL'SKIY, L.A.; SMIRNOV, P.I.

Schemes of installations for the discoloration and disinfection  
of water in low-capacity water-supply systems. Vod. i san.tekh.  
no.2:27-30 F '59. (MIRA 12:2)  
(Water--Purification)

5(1)

AUTHORS:

Kul'skiy, L. A., Koganovskiy, A. M.,  
Kalinichuk, Ye. M., Dikolenko, Ye. I.

SOV/64-59-4-12/27

TITLE:

Regeneration of Activated Coal After Adsorption Purification  
of Waste Waters in the Aniline Dyestuff Industry  
(Regeneratsiya aktivirovannogo uglya posle adsorbtsionnoy  
ochistki stokov anilinokrasochnoy promyshlennosti)

PERIODICAL:

Khimicheskaya promyshlennost', 1959, Nr 4, pp 46-49 (USSR)

ABSTRACT:

The regeneration of activated coal (AC) which may be used for  
purifying waste waters in aniline dyestuff factories is most  
suitably carried out by thermal-destructive regeneration. The  
first experiments of a simple annealing of the (AC) of the type  
KAD at 600-850°, without or with limited air admission have  
shown (Tables 1, 2) that already after having repeated the treat-  
ment for 3 - 4 times nearly complete deactivation of the (AC)  
occurs. Further investigations were carried out in superheated  
steam current with KAD and a relatively inert anthrazite (AN)  
which was produced according to the method IONKh AN UkrSSR  
(Ref 9). Regeneration was carried out in the laboratory in a  
retorte (previously heated up to 750°) in steam current at

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Regeneration of Activated Coal After Adsorption SC7/64-59-4-12/27  
Purification of Waste Waters in the Aniline Dyestuff Industry

750° for 20 minutes. The different substances corresponding to the above mentioned waste waters were adsorbed in (AC) and (AN) in different test series, and (AC) and (AN) were then regenerated. Experiments (Table 3) have shown that on heating the KAD in steam current at 700-750° for 20-40 minutes ((AN) for 60 minutes) a complete regeneration without a decrease in the adsorption properties may be obtained. The steam consumption is 0.9-1 g/g for KAD and 1-2 g/g for (AN) at a mean carbon consumption of 5-6%. For the purpose of obtaining high quality of regenerated coal with small carbon consumption, the temperature must rise slowly in the beginning of the regeneration process. The different composition of waste waters of aniline factories hardly influences the quality of the regenerated coal. For the purpose of checking laboratory experiments, two semi-industrial experiments were made in cooperation with K. Ye. Makhorin and V. M. Chertov. For these experiments a mixture of steam and carburetor gas - combustion products was used. The results obtained are given (Table 4). There are 2 figures, 4 tables, and 9 references, 8 of which are Soviet.

Card 2/2

KUL'SKIY, L.A. [Kul'skiy, L.A.] prof.

Silver water. Znan.ta pratsia no.11:27 N '59. (MIRA 13:8)  
(Silver--Physiological effect)

STEMPKOVSKAYA, L.A. ; KUL'SKIY, I.A.

Charcoal adsorption of mixtures of a series of organic substances  
from aqueous solutions. Ukr.khim.zhur. 25 no.1:62-72 '59.  
(MIRA 12:4)

1. Institut obshchey i neorganicheskoy khimii.  
(Adsorption) (Charcoal)



KUL'SKIY, L.A. [Kul's'kyi, L.A.], doktor tekhn.nauk

Scientific achievements in the field of water purification.  
Viznyk AN URSR 30 no.5:34-38 My '59. (MIRA 12:9)  
(Water--Purification)

KUL'SKIY, L.A.; KOGANOVSKIY, A.M.; GORONOVSKIY, I.T.; SHEVCHENKO, M.A.;  
DUMANSKIY, A.V., prof., otv.red.; MUSNIK, N.I., tekhred.

[Physicochemical foundations of water purification through  
coagulation] Fiziko-khimicheskie osnovy ochistki vody koagu-  
liatsiei. Kiev, Izd-vo Akad.nauk USSR, 1960. 107 p.

(MIRA 13:7)

1. Deystvitel'nyy chlen Akademii nauk Ukrainskoy SSR (for Du-  
manskiy).

(Water--Purification)

PHASE I BOOK EXPLOITATION

SOV/4625

Kul'skiy, Leonid Adol'fovich, Professor

*Khimiya i tekhnologiya obrabotki vody* (Chemistry and Technology of Water Treatment) Kiyev, Izd-vo AN Ukrainskoy SSR, 1960. 359 p. Errata slip inserted. 5,000 copies printed.

Sponsoring Agency: Akademiya nauk Ukrainskoy SSR. Institut obshchey i neorganicheskoy khimii.

Resp. Eds.: B. F. Markov, Doctor of Chemical Sciences, and O. I. Kirichenko, Engineer; Ed. of Publishing House: L. I. Sokolovskiy; Tech. Ed.: M. I. Yefimova.

PURPOSE: This book is intended for technical and medical personnel concerned with improving the quality of water for household and industrial use, and for students of institutes training specialists in the planning, construction, and operation of urban, rural, and industrial water supply systems.

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Chemistry and Technology of Water (Cont.)

SOV/4625

**COVERAGE:** The book deals with the modern technology of purification and disinfection of industrial and drinking water and presents data on the selection, calculation, layout, and operation of purifying installations of water supply systems. It explains the physicochemical and biological processes taking place in natural and treated waters. This is the 2nd enlarged and revised edition of a book published under the same title in 1954. The author thanks the following Candidates of Chemical Sciences: M. A. Shevchenko, and I. T. Goronovskiy; he also thanks the following Engineers: O. I. Kirichenko, V. F. Nakorchevskaya, and V. A. Slipchenko. Each of the five parts of the book is accompanied by an extensive bibliography of Soviet and other works.

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Card 2/7

KUL'SKIY, L.A.; SHEVCHENKO, M.A.

Ozonization of water for domestic and drinking purposes. Vod.1  
san.tekh. no.3:10-13 Mr '60. (MIRA 13:6)  
(Water--Ozonization)

KUL'SKIY, L.A., prof.; SHEVCHENKO, M.A., kand.khim.nauk

Deodorization of drinking water. Zhur. VAKH 5 no.6:616-623 '60.  
(MIRA 13:12)

(Drinking water)

KUL'SKIY, Leonid Adol'fovich [Kul's'kyi, L.A.]; KOGANOVSKIY, Aleksandr Markovich [Kohanova'kyi, O.M.]; BURKSER, Ye.S. [Burkser, I.E.S.], otv. red.; MUSNIK, N.Y. [Musnik, N.I.], red.; MATVIICHUK, O.A., tekhn. red.

[New methods for the purification of waste waters from chemical plants] Metody ochyshchennia stichnykh vod khimichnoi promyslovosti. Kyiv, 1961. 44 p. (Tovarystvo dlia poshyrennia politychnykh i naukovykh znan' Ukrain's'koi RSR. Ser.6, no.19) (MIRA 15:2)

1. Chlen-korrespondent Akademii nauk USSR (for Burkser).  
(Sewage--Purification)

KUL'SKIY, Leonid Adol'fovich; SHEVCHENKO, Marina Aleksandrovna;  
KALINIYCHUK, Yefim Mikhaylovich; DOLIVO-DOBROVOL'SKIY, L.B.,  
red.; NIKOLAYEVA, T.A., red. izd-va; RAKITIN, I.T., tekhn. red.

[Methods for improving the odor and taste of drinking water]  
Metody uluchsheniia zapakha i vkusa pit'yevoy vody. Moskva, Izd-  
vo M-va kommun. khoz. RSFSR, 1961. 98 p. (MIRA 15:1)  
(Drinking water)



KUL'SKIY, Leonid Adol'foyich[Kul's'kyi, L.A.], doktor tekhn. nauk;  
GORONOVSKIY, Igor' Trifilliievich [Goronovs'kyi, I.T.],  
kand. khim. nauk; SHEVCHENKO, M.A., kand. khim. nauk, otv.  
red.; POKROVSKAYA, Z.S.[Pokrovs'ka, Z.S.], red. izd-va;  
YEFIMOVA, M.I.[IEfimova, M.I.], tekhn. red.

[Automatic plants for controlling and regulating chemical and  
technological water-treatment processes] Avtomatychni prylady  
dlia kontroliu ta reguliuvannia khimiko-tehnologichnykh pro-  
tsesiv obrobki vody. Kyiv, Vyd-vo Akad. nauk URSR, 1961.  
126 p.

(Water--Purification)

(MIRA 15:2)

KUL'SKIY, Leonid Adol'fovich; BULAVA, Mikhail Nikiforovich; GORONOVSKIY,  
Igor' Trifil'yevich; SMIRNOV, Pavel Ivanovich; KOMENDANT, K.P.,  
red.; SERAFIN, V.T., tekhn. red.

[Designing and calculating equipment for cleaning water supply lines] Proektirovanie i raschet ochistnykh sooruzhenii vodoprovodov. Kiev, Gos.izd-vo lit-ry po stroit. i arkhitekt. USSR, 1961. 355 p. (MIRA 15:2)  
(Water-supply engineering)

KUL'SKIY, Leonid Adol'fovich; ROMODANOV, M.A., spets.red., zasluzhennyy  
vrach USSR; KILLEROG, N.M., red.izd-va; DAKHNO, Yu.M., tekhn.red.

[Silver water, its properties and uses] Serebrianaia voda,  
ee svoistva i primeneniye. Kiev, Izd-vo Akad.nauk USSR, 1962.  
58 p. (MIRA 15:5)  
(WATER--PURIFICATION) (SILVER)

KUL'SKIY, L.A., red.; BUGAYEV, M.V., inzh., red.; KVITNITSKAYA, N.N.,  
kand. med.nauk, red.; NAYSHTEYN, S.Ya., red.; SOTNIKOVA, Ye.V.,  
kand.med.nauk, red.; POKROVSKAYA, Z.S., red. izd-va; LISOVETS,  
A.M., tekhn. red.

[Protection of resevoirs and methods of water purification]  
Okhrana vodoemov i metody ochisti vody; doklady. Kiev, Izd-  
vo Akad.nauk USSR, 1962. 126 p. (MIRA 15:7)

1. Nauchno-tekhnicheskoye soveshchaniye po probleme okhrany  
vodoyemov i uluchsheniya kachestva vody, Kiyev, 1960. 2. Chlen-  
korrespondent Akademii nauk USSR i Institut obshchey i neorga-  
nicheskoy khimii Akademii nauk USSR (for Kul'skiy). 3. Ukrain-  
skiy nauchno-issledovatel'skiy institut kommunal'noy gigiyeny  
(for Kvitnitskaya, Nayshteyn). 4. Institut obshchey i neorga-  
nicheskoy khimii Akademii nauk USSR (for Sotnikova).  
(Water—Purification) (Reservoirs)

GLUSHKOV, V.M., akademik, red.; KUL'SKIY, L.A., red.; TESLYA, L.A., red.; KRIVORUCHKO, P.F., tekhn. red.

[Intensification and automation of processes regulating water quality] Intensifikatsiya i avtomatizatsiya protsessov regulirovaniya kachestva vody. Kiev, In-t tekhn. informatsii, 1962. 201 p. (MIRA 17:3)

1. Akademiya nauk Ukr.SSR (for Glushkov). 2. Chlen-korrespondent AN Ukr.SSR (for Kul'skiy).

KUL'SKIY, Leonid Adol'fovich, prof.; GABOVICH, R.D., prof., red.;  
TURCHINOVICH, V.T., prof., red.; RACHEVSKAYA, M.I., red. izd-  
va; LELYUKHIN, A.A., tekhn. red.

[Principles of the physiochemical methods of water treatment]  
Osnovy fiziko-khimicheskikh metodov obrabotki vody. Moskva,  
Izd-vo M-va kommun.khoz. RSFSR, 1962. 219 p. (MIRA 15:10)

1. Chlen-korrespondent Akademii nauk Ukrainskoy SSR (for  
Kul'skiy).

(Water-Purification)

KUL'SKIY, L. A. [Kul's'kyi, L. A.], prof.

Problem of the quality of water in the Ukraine. Khim. prom. [Ukr.]  
no.1:5-10 Ja-Mr '62. (MIRA 15:10)

1. Chlen-korrespondent AN UkrSSR.

(Ukraine--Feed-water purification)

KUL'SKIY, L. [Kul's'kyi, L.]

Let's conserve the treasures of nature. Nauka i zhyttia 12  
no.10:45-46 0 '62. (MIRA 16:1)

1. Chlen-korrespondent AN UkrSSR.  
(Ukraine--Water--Purification)



KUL'SKIY, L. A.; SHEVCHENKO, M. A.

Aeration of water as a method of its deodorization. Ukr. khim.  
zhur. 28 no.3:401-403 '62. (MIRA 15:10)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR.

(Water—Aeration)

KUL'SKIY, L.A.; NIKITINA, S.V.

Determination of silver in oligodynamic solutions.  
Ukr.khim.zhur. 28 no.8:977-980 '62. (MIRA 15:11)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR.  
(Silver~Analysis) (Drinking water)

KUL'SKIY, L.A.; NIKITINA, S.V.; SLIPCHENKO, V.A.

Preserving drinking water by means of silver electrolytic solutions. Ukr.khim.zhur. 28 no.8:981-986 '62. (MIRA 15:11)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR.  
(Drinking water)  
(Silver)

ZAGRAY, Ya.M.; KUL'SKIY, L.A.; KOGANOVSKIY, A.M.

Use of a fluidized bed of cation exchangers for the removal of zinc from sewage waters. Khim.volok. no.2:58-61 '63. (MIRA 16:5)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR.  
(Ion exchange) (Sewage Purification) (Zinc)

KUL'SKIY, Leonid Adol'fovich, prof.; FORTUNATOV, N. S., doktor tekhn. nauk, retsenzent; SHEVCHENKO, M. A., kand. khim. nauk, otv. red.; SLIPCHENKO, V. A., nauchnyy red.; RAKHLINA, N. P., tekhn. red.

[Principles of the technology of water conditioning; processes and apparatus] Osnovy tekhnologii konditsionirovaniia vody; protsessy i apparaty. Kiev, Izd-vo Akad. nauk USSR, 1963. 452 p. (MIRA 16:7)

1. Chlen-korrespondent AN Ukr. SSR (for Kul'skiy).  
(Water--Purification)

KUL'SKIY, L. [Kul's'kyi, L.]

Silver water. Nauka i zhyttia 13 no.10:46 N '63. (MIRA 16:12)

1. Chlen-korrespondent AN UkrSSR.

KUL'SKIY, L.A.; SOTNIKOVA, Ye.V.; NIKITINA, S.V.; SLIPCHENKO, V.A.

Long-term storage of drinking water containing silver ions.  
Gig. i san. 28 no.1:99-102 Ja'63. (MIRA 16:7)

1. Iz Instituta obshchey i neorganicheskoy khimii AN SSSR.  
(WATER-PURIFICATION) (SILVER IONS)

S/073/63/029/001/008/009  
A057/A126

AUTHORS: Kul'skiy, L.A., Kachan, A.A., Sherstoboyeva, M.A., Timoshenko, T.K.

TITLE: The catalytic activity of silver water upon the oxidation of indigo-carmin by hydrogen peroxide

PERIODICAL: Ukrainskiy khimicheskiy zhurnal, v. 29, no. 1, 1963, 106 - 108

TEXT: The peroxidase activity of silver water (Agw) which is known as a strong bactericide was investigated at the Institut obshchey i neorganicheskoy khimii AN USSR, Belotserkovskiy institut (Institute of General and Inorganic Chemistry AS UkrSSR, Belotserkov Institute) using as a model the reaction between  $H_2O_2$  and indigocarmin (IC). The peroxidase activity of Agw was compared with the activity of silver ions, and solutions containing dispersed silver,  $Ag_2O$  and  $AgCl$ . The effect of casein was also studied. The experiments were carried out with  $5 \cdot 10^{-4}$  M IC solutions at pH  $\sim 5.9$ , and the reaction was controlled by measuring the optical density ( $605 m\mu$ ) of the solution. It was observed, in agreement with literature data, that the reaction of IC decolorization with  $H_2O_2$  occurs by the first order in relation to IC. The obtained values of the reaction

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The catalytic activity of silver water upon ....

S/073/63/029/001/008/009  
A057/A126

rate constants for the oxidation of IC with  $H_2O_2$  demonstrate the peroxidase activity of Agw and also (but less) of  $Ag_2O$  colloidal silver, respectively. The activation energy is not changed by the presence of the catalyst, thus indicating the connection of the catalytic effect with an increase of the entropy of the system. This is assumed to be related to an increase of the number of active particles (formed by decomposition of  $H_2O_2$ ), which decompose IC more easily. The assumption was proved by experiments with an inhibitor (pyrophosphoric acid and  $\gamma$ -hydroxyquinoline). This inhibitor of the  $H_2O_2$  decomposition inhibited also the IC decomposition. It was also proved experimentally that Agw promotes the catalytic activity of casein on the oxidation of IC by  $H_2O_2$ . There are 3 figures and 1 table.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii AN USSR, Belotserkovskiy s/kh Insitut (Institute of General and Inorganic Chemistry AS UkrSSR, Belotserkovsk s/kh Institute)

SUBMITTED: February 16, 1962

Card 2/2

KUL'SKIY, L.A.; KALINIYCHUK, Ye.M.; BARANOVSKAYA, A.N.

Interaction of active chlorine with ammonia and phenols in  
connection with drinking water purification. Ukr. khim.  
zhur. 29 no.10:1099-1104 '63. (MIRA 17:1)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR.

KUL'SKIY, L.A.; ZAGRAY, Ya.M.; KOGANOVSKIY, A.M.

Use of a fluidized bed of cation exchangers for the removal of  
nonferrous and heavy metals from waste waters. Ukr. khim.  
zhur. 29 no.11:1228-1232 '63. (MIRA 16:12)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR.

ZAGRAY, Ya.M.; KOGANOVSKIY, A.M.; KUL'SKIY, L.A.

Study of the conditions of ion exchange in a fluidized bed of  
cation exchangers. Ukr.khim. zhur. 29 no.12:1326-1332 '63.  
(MIRA 17:2)

1. Institut obshehey i neorganicheskoy khimii AN UkrSSR.

KUL'SKIY, I.A.; NAKORCHEVSKAYA, V.F.; SLIPCHENKO, V.A.

Effect of active silicic acid additions on the process of sedimentation of a coagulated suspension. Ukr.khim.zhur. 29 no.12:1336-1340 '63. (MIRA 17:2)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR.

KUL'SKIY, L.A.; NAKORCHEVSKAYA, V.F.; SLIPCHENKO, V.A.; DANILEVSKAYA, I.P.

Effectiveness of the flocculating effect of active silicic acid and polyacrylamide. Ukr.khim.zhur. 29 no.12:1341-1346 '63.

(MIRA 17:2)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR.

KUL'SKIY, L.A.

Chemical problems affecting the conservation of water  
resources, Vest. AN SSSR 33 no.5:54-57 My '63.

(MIRA 16:6)

1. Chlen-korrespondent AN UkrSSR.  
(Water resources development)

KUL'SKIY, L.A.; SLIPCHENKO, V.A.; NAKORCHEVSKAYA, V.F.

Investigating the conditions for obtaining sols of active  
silicic acid by chlorination of sodium silicate solutions.

Ukr. khim. zhur. 30 no.1:108-111 '64.

(MIRA 17:6)

1. Institut obshchey i neorganicheskoj khimii AN UkrSSR.



KUL'SKIY, Leonid Adol'fovich; KALSHNYCHUK, Yefim Mikhaylovich;  
DOLIVO-DOROVOL'SKIY, L.B., red.

[Conditioning of drinking water; removal from water of  
phenols and petroleum products] Konditsionirovanie pi-  
t'evoi vody; ochildka vody ot fenolov i nefteproduktov.  
Moskva, Stroiizdat, 1964. 83 p. (MIRA 17:10)

KUL'SKIY, L.A. [Kul's'kyi, L.A.]; SOTNIKOVA, Ye.V. [Sotnikova, O.V.];  
PTITSA, R.P. [Ptytsia, R.P.]

Biochemical oxidation of chlorophenols. Dop. AN URSR no.10:  
1373-1375 '64. (MIRA 17:12)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR.
2. Chlen-korrespondent AN UkrSSR (for Kul'skiy).

KULAKOV, L.A.; KOGANOVSKIY, A.N.; SEDUCHENKO, M.A.

Chemical problems involved in the protection of bodies of water  
and improvement of the quality of water. Ukr. khim. zhur. 30  
no.12:1241-1244 1964 (MIRA 18:2)

KUL'SKIY, L.A.; SOTNIKOVA, Ye.V.; MIKHALEVA, A.P., red.

[Biochemical purification of industrial waste waters;  
methods and units] Biokhimicheskaya ochistka promyshlen-  
nykh stochnykh vod; metody i ustanovki. Kiev, In-t tekhn.  
informatsii, 1965. 40 p. (MIRA 18:11)

L 21772-66 EWT(m)

ACC NR: AP6002604

(A)

SOURCE CODE: UR/0286/65/000/023/0099/0099

AUTHORS: Kul'skiy, L. A.; Slipchenko, V. A.; Nakorchevskaya, V. F.

ORG: none

TITLE: Method for purifying water. Class 85, No. 176834

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 23, 1965, 99

TOPIC TAGS: water purification, water purifying compound

ABSTRACT: This Author Certificate presents a method for purifying water by introducing a coagulant into the water, preparing a solution of sodium silicate by a chlorinating agent, and subsequently aging the solution, diluting it with water, and introducing the obtained salt into the water to be purified. To intensify the process, a chlorine-air mixture of composition 1:0.1--1:20 and salt with 0.5--20%  $\text{SiO}_2$  of the dose of anhydrous coagulant are used as the chlorinating agent. In the chlorinating process the molar ratio of  $\text{Cl}_2$ -- $\text{Na}_2\text{O}$  in the chlorinated solution is controlled by maintaining an oxidation-reduction potential in the limits 600--1200 mv. In the solution aging process the degree of activity

Card 1/2

UDC: 663.632.435

L 21772-66

ACC NR: AP6002604

is controlled photometrically, using the Tyndall effect.

SUB CODE: 13/ SUBM DATE: 01Jul63

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L 38881-66 EMT(1) IJF(c)

ACC NR: AP6018570

SOURCE CODE: UR/0181/66/008/006/1944/1946

AUTHOR: Kul'sreshta, A. P.; Goryunov, V. A.

ORG: Moscow State University im. M. V. Lomonosov (Moskovskiy gosudarstvennyy universitet)

TITLE: On the calculation of thermostimulated currents

SOURCE: Fizika tverdogo tela, v. 8, no. 6, 1966, 1944-1946

TOPIC TAGS: zinc sulfide, semiconductor band structure, thermoelectric phenomenon, semiconductor conductivity, semiconductor carrier, capture cross section, electron trapping, electron recombination

ABSTRACT: To obtain additional data on the deep levels of semiconductors by the method of thermostimulated conductivity, the authors consider a general case when particular assumptions concerning the violation of equilibrium between the capture of level and the conduction band (or valence band) do not play an important role. For the purpose of eliminating some arbitrariness in the calculation of the depth of the energy levels and in the estimates of the effective cross section for the carrier capture by the traps, resulting from more approximate earlier analyses of this phenomenon. An expression is derived for the conductivity of the semiconductor in the case when the capture levels are of the same depth. Assuming small variation of the capture cross section and of the recombination time near the temperature corresponding to the maximum of the thermostimulated conductivity curve, this maximum

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L 98881-06

ACC NR: AP6018570

3

temperature is calculated from the expression for conductivity. By preparing a set of curves of the maximum temperature against the density, it is possible to determine the relative probability of recombination and of repeated captures for various trap depths. A calculation nomogram and plots of the thermostimulated conductivity for ZnS at different trap filling densities is presented. The results can be of use in analysis of electron-hole processes occurring in broad-band semiconductors. The authors thank A. E. Yunovich, V. L. Levshin, and V. S. Vavilov for useful advice. Orig. art. has: 2 figures and 7 formulas.

SUB CODE: 20/ SUBM DATE: 27Dec65/ ORIG REF: 004/ OTH REF: 001

*ne*  
Card 2/2



L 31162-66 EWT(1)/T/EWA(h) IJP(c) AT  
ACC NR: AP6006813 SOURCE CODE: UR/0181/66/008/002/0353/0355

AUTHOR: Kul'sreshta, A. P.; Yumovich, A. E.

ORG: Moscow State University im. M. V. Lomonosov (Moskovskiy gosudrastvennyy uni-  
versitet)

TITLE: High-voltage current oscillations in a GaAs semi-insulator

SOURCE: Fizika tverdogo tela, v. 8, no. 2, 1966, 353-355

TOPIC TAGS: gallium arsenide, semiconductor material, thermal excitation, electro-  
magnetic oscillation

ABSTRACT: Persistent current oscillations were observed in p-gallium arsenide semi-insulators at high voltages during studies of thermally stimulated currents in these crystals. The oscillations were observed throughout the entire temperature interval from 77 to 350°K. These oscillations show up in the negative section of the current-voltage characteristic when the electric field intensity reaches a threshold value of approximately 200 v/cm. The oscillations were sinusoidal, sawtoothed or of a more complex relaxation type. Curves for the amplitude as a function of voltage first show an increase, and then a reduction to zero with a strong increase in

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ACC NR: AP6006813

current. The period of the oscillations varies from a few dozen microseconds to hundreds of milliseconds depending on the temperature, the applied field, and the intensity and spectral composition of the incident light. Measurements showed that the distribution of the electric field along the specimen is weakly nonhomogeneous in the case of weak fields and strongly nonhomogeneous in fields close to the oscillation threshold. The maximum field was always observed at the anode with an increase in field intensity at the cathode also, although not as strong. The strong region of the field close to the anode was especially sensitive to light. The maximum amplitude was observed at an energy of approximately 1.23 ev which corresponds to a wavelength of a little greater than one micron. The oscillations are associated with the same traps which are responsible for thermally stimulated currents. In conclusion the authors take this occasion to express their sincere gratitude to V. S. Vavilov for valuable consultation. They also thank V. A. Goryunov for assistance with this work. Orig. art. has: 3 figures.

SUB CODE: 20/

SUBM DATE: 16Jun65/

ORIG REF: 006/

OTH REF: 005

Card 2/2

VEKSLER, V.J.; VODOPJANOV, A.F.; JEFREMOV, D.V.; MINC, A.Z.; VEISBEIN, M.M.;  
GASEV, M.G.; ZEJDIC, A.J.; IVANOV, T.P.; KOLCMENSKIJ, A.A.; KOMAR, E. G.;  
MALYSEV, J.E.; MONOSZON, M.A.; HEVJAZSKIJ, J.Ch.; PETUCHOV, V.A.;  
RABINOVIC, V.A.; RUBCINSKIJ, S.N.; SIMEONIKOV, K.D.; STOLOV, A.M.;  
KULT, Karel, inz.

The synchrophasotron for particle acceleration to 10 BeV energy of the  
Soviet Academy of Sciences. Jaderna energie 3 no.1:5-9 Ja '57.

1. Ustav jaderne fysiky (for Kult).

KULT, K.; KARMASIN, M.; FUKATKO, T.

Acceleration of alpha particles on the U-120 cyclotron.  
Chekhosl fiz zhurnal 14 no. 3:206-209 '64.

1. Nuclear Research Institute, Czechoslovak Academy of Sciences, Rez.

KULT, K.

Isochronous cyclotron. Jaderna energie 10 no.7:264-266 JI'64

L 37257-66 EWT(1)/EWT(m) IJP(c) AT

ACC NR: AP6027878

SOURCE CODE: CZ/0038/66/000/003/0101/0101

AUTHOR: Hrda, Alena; Kult, Karel; Kuzmiak, Mikulas

ORG: Nuclear Research Institute, CSAV, Rez (Ustav jaderneho vyzkumu CSAV)

TITLE: Initial <sup>2/</sup>trajectories of ions leaving an open ion source of a cyclotron with non-zero initial energies

SOURCE: Jaderna energie, no. 3, 1966, 101

TOPIC TAGS: cyclotron, ion source, particle trajectory, ion beam focusing

ABSTRACT: NRI Report No. 1408/65. A beam of polarized atoms in the center of a cyclotron may be ionized by means of an inversion-magnetron type ion source with an anode voltage of up to 15 kv. Considerable initial velocities of ions emitted from that source affect the shape of the trajectories as well as the ion phase focusing. The paper presents a detailed analysis of the initial motion of ions rising from an open ion source with non-zero initial energies into the 2-area. The ion phase focusing on the initial orbits was demonstrated. During some initial periods of high-frequency voltage the ions are phase bunched around the optimum phase, which guarantees their capture for the accelerating process. [Based on authors' Eng. abst.] [JPRS: 36,845]

SUB CODE: 20 / SUBM DATE: none

Card 1/1

UDC: 621.384.633: 621.384.6.01

KULTAS, K.

Distribution of oxidative enzymes in glial and nerve cells in the temporal cortex of the rabbit brain. Cesk. morf. 13 no.1: 43-50 '65

1. Institute of Experimental Biology of the Academy of Sciences of the Estonian S.S.R. Tallin, and the Institute of Brain of the Academy of Medical Sciences of the U.S.S.R., Moscow.

DYUBUA, B.Ch.; KULTASHEV, O.K.

Thermionic emission of some transition metal aluminides. Radiotekh. i  
elektron. 9 no.9:1725-1727 S '64. (NIRA 17:10)



LYUBA, B.Ch.; KULISHNEV, O.E.; TSYKANOVA, I.A.

Work function of Nb-Ta, Ti-Ta, and Ta-Re alloys. Izv. Akad. Nauk SSSR, Ser. Fiz. Khim. Nauk, no. 11, 1961, 2003 N 164. (MIRA 17-12)

L 27213-66 EWT(m)/T/EWP(t)/ETI IJP(c) JD/JG

ACC NR: AP6012469

SOURCE CODE: UR/0181/66/008/004/1105/1109

AUTHOR: Dyubua, B. Ch.; Kultashev, O. K.; Gorshkova, L. V.

ORG: none

TITLE: Work function of solid solutions of tungsten with molybdenum and tantalum

SOURCE: Fizika i tekhnika elektroniki, v. 8, no. 4, 1961, 1105-1109

TOPIC TAGS: tungsten, molybdenum, tantalum, solid solution, work function, thermionic emission, temperature dependence

ABSTRACT: This is a continuation of earlier work (Radiotekhn. i elektron. v. 9, 2061, 1964 and earlier) and is aimed at explaining the reduction in the work function of tungsten solutions with metals having similar electronic and crystalline structures and nearly equal atomic radii (molybdenum and tantalum). The samples were prepared from pure ingredients in a helium atmosphere in a vacuum arc furnace in the form of flat discs. The work function was calculated from the measured thermionic emission at zero field  $\phi$ , using the Richardson-Dushman formula. The work function was plotted as a function of the tungsten concentration (0-100%) and of the temperature (1300-2300K). The results point to the presence of two groups of solution, those with tungsten concentrations up to about 70%, and those with higher concentration. In the first group the work function remains constant in both the molybdenum and tantalum alloys (about 4.2 eV). In the second group the work function drops rapidly to a value lower than the work function of pure molybdenum or tantalum.

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L 27713-66

ACC NR: AF6012469

0

Other nonmonotonic changes are observed in the concentration dependence of the work function, brought about by differences in the heat treatment preceding the measurement. The work function is independent of the temperature in the first group and increases with temperature in the second. An analysis of several possible causes shows that the decrease in the work function is most likely due to the adsorption of the more volatile component (tantalum or molybdenum) on the surface of the alloy. This is borne out by certain analogies between the behavior of the solid solution and a coated cathode. Orig. art. has: 3 figures. [02]

SUB CODE: 20,18/ SUBM DATE: 19Aug65/ ORIG REF: 007/ OTH REF: 001/  
ATD PRESS: 5001

L 30409-66 EWT(m)/EWP(t)/ETI IJP(c) WW/JD/JG

ACC NR: AP6010406

SOURCE CODE: UR/0126/66/021/003/0396/0402

AUTHOR: Dyubua, B. Ch.; Kultashev, O. K.

ORG: none

TITLE: Work function of W-Hf, Ta-Hf, Nb-Hf, Re-Zr, and W-Re alloys

SOURCE: Fizika metallov i metallovedeniye, v. 21, no. 3, 1966, 396-402

TOPIC TAGS: work function, tungsten, alloy, hafnium alloy, tantalum alloy, niobium alloy, rhenium alloy, zirconium alloy, *REFRACTORY METAL, THERMIONIC EMISSION*

ABSTRACT: The paper presents data on the work function of refractory metals in which various amounts of hafnium and zirconium have been dissolved. The work function was determined from the Richardson-Dushman equation for  $A = 120.4 \text{ A/cm}^2 \text{ deg}^2$ . The thermionic emission measurements were carried out in a vacuum of  $10^{-8} - 10^{-9} \text{ mm Hg}$ . The phase composition of the alloys was determined by microstructural analysis. The work function of pure Re, Ta, Nb, and Zr was shown to remain constant with changing temperature. The addition of hafnium and zirconium was found to decrease the work function of the refractory metals. The cause of this effect is thought to be the adsorption

Card 1/2

UDC: 537.533.2:539.292

L 30409-66

ACC NR: AP6910406

of hafnium and zirconium atoms on the surface of the solid solution. In the region of the  $\sigma$  phase of the W-Re alloy an increase in work function up to 5.0 eV was observed. This is attributed to a possible adsorption of rhenium. The authors thank Ye. M. Savitskiy and M. A. Tylkina for providing the ingots of the alloys studied and for their interest in this work. Orig. art. has: 8 figures. [08]

SUB CODE: 11 / SUBM DATE: 30Sep64 / ORIG REF: 008 / OTH REF: 001 / ATD PRESS:

5117

Card 2/2 CC

L 07093-67 EWP(e)/EWT(m)/EWP(w)/EWP(t)/ETI IJP(c) JD/JG/AT/WH  
ACC NR: AP6019005 SOURCE CODE: UR/0109/66/011/006/1149/1150

AUTHOR: Dyubua, B. Ch.; Yermolayev, L. A.; Kultashev, O. K.

ORG: none

TITLE: Emission properties of Pt-Th, Ir-Th, Os-Th and Re-Th alloys

SOURCE: Radiotekhnika i elektronika, v. 11, no. 6, 1966, 1149-1150

TOPIC TAGS: electron emission, emissivity, thermionic emission, secondary electron emission, *THORIUM ALLOY*

ABSTRACT: The results of an experimental investigation of thermionic and secondary-electron emission of high-melt alloys are reported. The microsections of the test specimens were two phase: Re<sub>1</sub>Th, Os<sub>1</sub>Th, Ir<sub>5</sub>Th, and Pt<sub>5</sub>Th (A. E. Dwight, Trans. Am. Soc. Metals, 1961, 53, part 1, 479; J. R. Thomson et al., Common Metals, 1964, 6.1, 3). The results are tabulated below:

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UDC: 669.231 / 233.5.018.5:621.385.7

L 07093-67

ACC NR: AP6019005

Alloy	Work function 1600K ev	Temp. coeff. ev/1K	Max. coeff. sec.-el. emiss.
Pt-Th 2%	4,00	$0 \cdot 10^{-8}$	1,57
Ir-Th 2%	3,90	$4 \cdot 10^{-8}$	2,00
Os-Th 2%	3,08	$< 10^{-8}$	2,07
Re-Th 2%	3,09	$< 10^{-8}$	1,95

Orig. art. has: 1 table.

SUB CODE: 20, 09 / SUBM DATE: 17Nov65 / ORIG REF: 006 / OTH REF: 003

Card 2/2 *LC*

YAKOVSKIY, F.V.; KULTASHEV, Ye.N.

Results of the full-scale testing of the hull strength of the  
steamer "Leninskii Komsonol." Biml. tekhn. ekon. inform. Tekh.  
opr. morsk. flota 7 no.4:27-35 '62. (MIRA 16:4)

1. Central'nyy nauchno-issledovatel'skiy institut morskogo  
flota

(Ship trials) (Hulls(Naval architecture))



BRIKER, A.S.; KULTASHEV, Ye.N., inzh.

Utilizing the hull space in "Arkhangel'sk"-type motorships.  
Biul.tekh.-ekon. inform. Tekh.upr.Min.mor.flota 7 no.10:  
15-28 '62. (MIRA 16:9)

1. TSentral'nyy nauchno-issledovatel'skiy institut morskogo flota.  
(Hulls (Naval architecture)) (Cargo handling)

BRUKER, A.S., inzh.; GAVRILOV, M.N., inzh.; KULTASHEV, Ye.N., inzh.

Results of testing the strength and vibration of "Dzhankoy"-type  
ship hulls. Biul. tekhn.-ekon. inform. Tekh. upr. Min. mor. flota  
7 no.12:30-34 '62. (MIRA 16:11)

1. Tsentral'nyy nauchno-issledovatel'skiy institut morskogo  
flota.

BRIKER, A. S., inzh.; GAVRILOV, M. N., inzh.; KULTASHEV, Ye. N., inzh.

"Dzhanskoy"-type coal and ore carriers. Sudostroenie 28 no.10:  
1-3 0 '62. (MIRA 16:1)

(Coal-carrying vessels)  
(Ore carriers)

KUL'TEBAYEV, T.Kh.

Examination of arteries from the upper extremity in newborn boys.  
Izv. AN Kazakh. SSR. Ser. kraev.pat. no.6:152-161 '50. (MLRA 9:8)  
(BRACHIAL ARTERY) (INFANTS (NEWBORN))

KUL'TEPINA, O.S.

Gastric function in infants. Fiziol. zh. SSSR 39 no.4:432-436 July-Aug 1953.  
(CML 25:1)

1. Department of Physiology of the State Scientific-Research Pediatrics Institute of the Ministry of Public Health ~~ESRS~~ USSR, Moscow.

KUL'TEPINA, O. S.

KUL'TEPINA, O. S.- "Secretory Activity of Stomach in Pre-school Children as a Function of the Typological Trend of their Upper Nervous Activity and the Defferent Functional State of their Brain Cortex." Inst of Upper Nervous Activity of Acad Sci USSR, Moscow, 1955 (Dissertations for Degree of Candidate of Medical Sciences)

SO: Knizhnaya Letopis' No. 26, June 1955, Moscow

KULTEPINA-O.S.

KUL'TEPINA, O.S. (Kalinin)

Physiological factors involved in the act of feeding children.

Fel'd. i akush. 23 no.8:3-6 Ag '58

(MIRA 11:8)

(CHILDREN--NUTRITION)



KUL'TEPINA, O.S., kand.med.nauk, KHAR'KOVA, R.M.

Function of the cardiovascular system in preschool children [with summary in English]. *Pediatrics* 36 no.6:32-36. Je '58 (MIRA 11:6)

1. Iz otdela fiziologii (zav. - doktor med.nauk N.Ye. Ozeretskoykaya) Nauchno-issledovatel'skogo instituta pediatrii Ministerstva zdoravookhraneniya RSFSR (dir. - kand.med.nauk V.N. Karachevtseva).

(CARDIOVASCULAR SYSTEM, physiol.  
in child. of preschool age (Rus))

KUL'TEPINA, O.S.

Gastric secretory function in children depending on the typologic controlability of their central nervous activity and the functional state of the cerebral cortex. *Viziol.zhur.* 42 no.5:357-362 My '56.  
(MIRA 9:11)

1. Otdel fiziologii Nauchno-issledovatel'skogo pediatricheskogo instituta Ministerstva zdavookhraneniya RSFSR, Moskva.

(REFLEX, CONDITIONED

gastric juice secretion in child. relation on central CNS)



~~KUL'TEPINA, O.S.~~; GEL'MAN, V/B.

Case of Niemann-Pick disease. Vop. okhr. mat. i det. 6 no. 1:90-92  
Ja '61. (MIRA 14:4)

1. Iz kafedry detskikh bolezney (zav. - prof. Ye.D. Belyayeva)  
Kalininskogo meditsinskogo instituta (dir. - dotsent A.I. Kushnev)  
i 2-y gorodskoy bol'nitsy (glavnyy vrach O.A. Gol'dzamid).  
(LIPIDOSIS)

DONSKAYA, Ye.V., kand. tekhn. nauk; SHIROKOVA, V.N., kand. khim. nauk;  
VOLKOVA, M.G., laborant; Prinsipali uchastiye: KUL'TER, V.Ya.,  
laborant; KOZHEVNIKOVA, V.N., laborant

Trilonometric method of determining the sulfate ion in paper.  
Trudy LTITSBP no.10:80-84 '62. (MIRA 16:8)

(Paper—Analysis)

(Sulfates)

38042. KUL'TIASOV, I. M.

Vysokogornyy statsionar Glavnogo botanicheskogo sada Akademii nauk SSSR  
v Zapadnom Tyan'-Shane. Byulleten' Glav. botan. sada, vyp. 4, 1949,  
s. 30-34.

KUL'TIASOV, I. K.

"Characteristics of the Ecology of Alpine Plants in Western  
Tyan' Shan." Sub 30 May 51, Moscow City Pedagogical Inst imeni  
V. P. Potemkin.

Dissertations presented for science and engineering degrees  
in Moscow during 1951.

SO: Sum. No. 480, 9 May 55

*[Handwritten signature]*

SHAKHTAKHTINSKIY, M.G.; KULIYEV, A.A.

Radioisotope study of pressures of saturated vapors of compounds  
of the Tl-Se system. Dokl. AN Azerb. SSR 15 no.10:891-895 '59.  
(MIRA 13:3)

1. Institut fiziki AN AzerSSR.  
(Vapor pressure) (Thallium selenide)



1. KUL'TYASOV, I. M.
2. USSR (600)
4. Alpine Flora - Tien Shan
7. Ecological characteristics of several representatives of the flora of western Tien Shan. Biul.Glav.bot.sada. No. 12, 1952.
9. Monthly List of Russian Accessions, Library of Congress, March 1953. Unclassified.

1. KUL'TYASOV, I. M.
2. USSR (600)
4. Botanical Gardens
7. Problems in inventorying a botanical garden collection. Biul.Glav.bot.sada no. 13, 1952.
9. Monthly List of Russian Accessions, Library of Congress, March 1953, Unclassified.

KUL'TIASOV, I.M.

~~\_\_\_\_\_~~ Exchange seed catalogs. Biul.Glav.bot. sada no.18:125-130 '54.

(MLRA 8:3)

1. Glavnyy botanicheskiy sad Akademii nauk SSSR.  
(Seeds—Catalogs)

KUL'TIASOV, I. M.

ORLOV, A.Ya.; KABANOV, N.Ye., professor, redaktor; POZHARITSKIY, K.L.,  
professor, redaktor; KUL'TIASOV, I.M., redaktor; ALKSEYEVA, T.V.  
tekhnicheskiy redaktor.

[Coniferous forests of the Amgun-Bureya interfluve] Khvoynye lesa  
Amgun'-Bureinskogo meshdurech'ia. Moskva, Izd-vo Akademii nauk  
SSSR, 1955. 206 p. [Microfilm] (MLRA 8:11)  
(Khabarovsk Territory--Forests and forestry)

KORSTSKAYA, Lidiya Aleksandrovna; KARAVAYEV, M.N., otvetstvennyy redaktor;  
KUL'TIASOV, I.M., redaktor izdatel'stva; ASTAF'YEVA, G.A.,  
tekhnicheskiiy redaktor

[Fodder resources of the Zeya-Bureya plain] Kormovye resursy Zeisko-  
Bureinskoi ravniny. Moskva, Izd-vo Akademii nauk SSSR, 1956. 77 p.  
(Amur Province--Forage plants) (MLRA 9:8)

KUL'TIASOV, I.M.

Ecological historical analysis of morphogenetic processes in  
the sainfoin genus. Bot. zhur. 46 no.12:1740-1755 D '61.  
(MIRA 15:1)

1. Moskovskaya sel'skokhozyaystvennaya akademiya imeni  
K.A. Timiryazeva.

(Sainfoin)  
(Botany--Morphology)

KUL'TIASOV, I.M.

Ecologic and morphologic characteristics of cushion-type sainfoins  
of Central Asia. Bot. zhur. 47 no.5:645-657 My '62. (MIRA 16:5)

1. Moskovskaya sel'skokhozyaystvennaya akademiya imeni K. A.  
Timiryazeva.

(Soviet Central Asia—Sainfoin)

KUL'TIASOV, I.M.

Ecological and morphological analysis of the sainfoin *Onobrychis*  
*Sirtensisii*. Trudy Glav. bot. sada 9:160-170 '63. (MIRA 16:5)

(Kopet-Dag-Sainfoin)

(Plant introduction)



GOLUBEV, Vitaliy Nikolayevich; KUL'TIASOV, Mikhail Vasil'yevich,  
doktor biol. nauk, otv. red.; KUL'TIASOV, I.M., red.

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